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CONTRIBUTIONS FROM THE CRYPTOGAMIC LABORATORY
OF HARVARD UNIVERSITY. No. LXXXII.

*NEW LABOULBENTIALES FROM CHILE AND NEW
ZEALAND.*

BY ROLAND THAXTER.

(Continued from page 3 of cover.)

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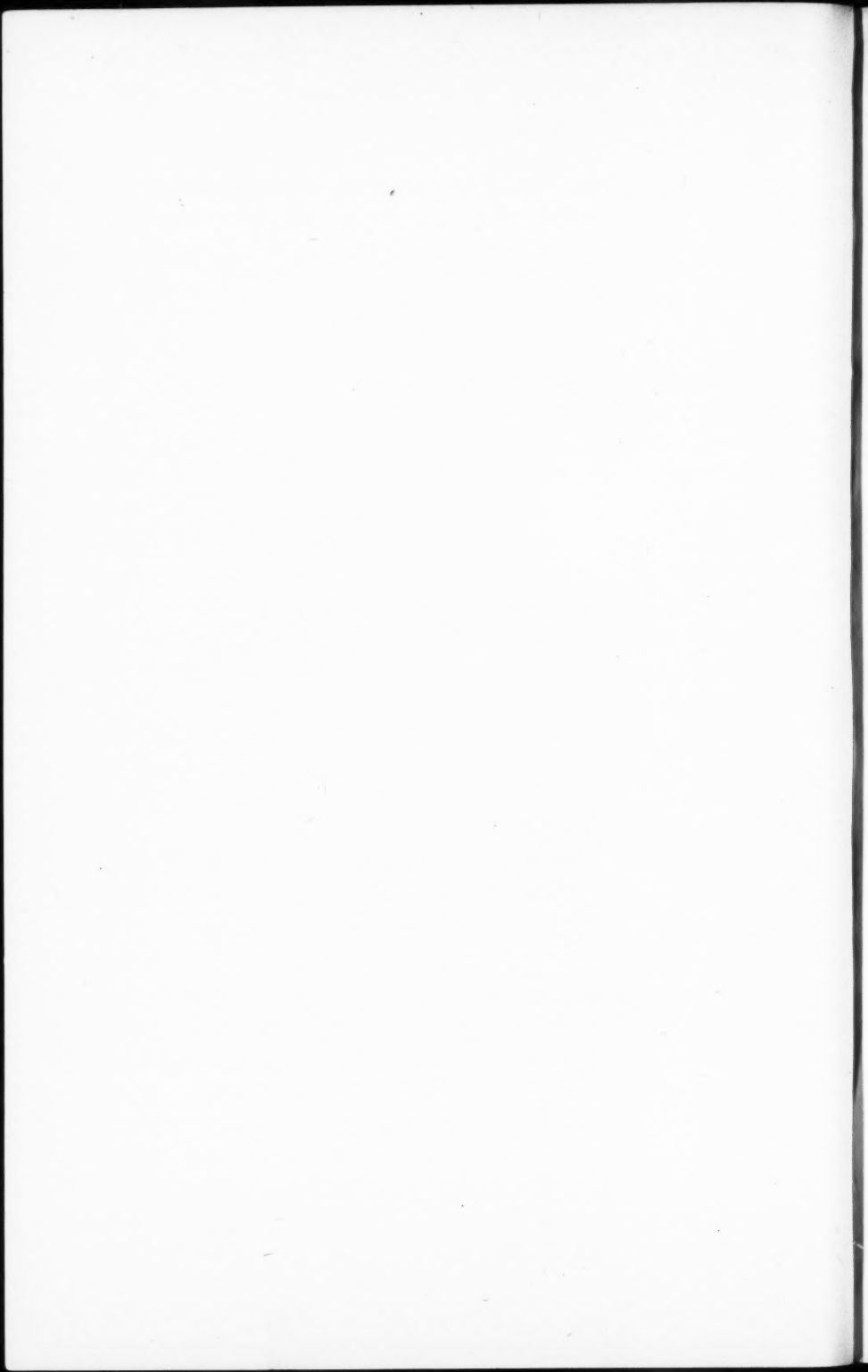
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Received April 5, 1918.

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DURING a stay of several months in Chile, which extended from November, 1905 to March, 1906, the writer paid but scant attention to the collection of Laboulbeniales; since, in the absence of any very considerable number of insect hosts, his time and attention was largely occupied with the very rich cryptogamic flora of this region, large collections of which were made. The comparative rarity of hosts, especially in the heavily forested area about Corral, was surprising; and, with few exceptions, the parasites which occurred on them were not characterized by any unusual peculiarities. Less than fifty species were obtained, many of which were familiar. Among the latter may be mentioned *Herpomyces Ectobiae*, *Laboulbenia diversipes*, *L. granulosa*, *L. sigmoidea*, *L. pedicillata*, *L. polyphaga*, *L. Pterostichi*, *L. Tachyis*, *L. variabilis*, *L. vulgaris*, *Corethromyces Stilici*, *Acompomyces brunneolus*, *Ecteinomyces Trichopterophilus*, *Ceratomyces mirabilis*, *C. filiformis*, and *Coreomyces Corisae*. A small number of forms were also found which, although new, were not in sufficiently good condition for description. These include two species each of *Rhachomyces*, *Mimeomyces* and *Corethromyces*, as well as several species of *Laboulbenia*, a genus now in some confusion. *Stigmatomyces Chilensis*, described in These Proceedings, 52, p. 685, should also be added to the list of forms obtained.

The flora of southern Chile and New Zealand being similar in many respects, I have ventured to include in the present enumeration five species which were found in a small lot of beetles very kindly collected for me by Messrs. Eames and Sinnott at Auckland, in 1910. I am further indebted to Mr. Gilbert J. Arrow of the British Museum for several determinations.

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DIANDROMYCES nov. gen.

Axis of the receptacle coincident with that of the appendage and consisting of a series of superposed cells, the three lower constituting the receptacle proper, the subbasal cell of which produces two compound antheridia which are placed symmetrically on either side, and subtend two perithecia similarly developed from the third cell. Appendage multicellular, its lower cells developing branches right and left. Perithecia normal. Antheridia consisting of a stalk-cell, and

a small basal cell which subtends four or five antheridial cells discharging into a well developed neck.

This type is not nearly related to that of any described genus unless it be *Dichomyces*. The continuity of the axes of its receptacle and appendage is similar to the condition found in *Monoicomyces*, and its general appearance is not unlike that of simpler species of this genus. The relations of the antheridia are, however, wholly different, and their structure is more like that of some of the better developed species of the unisexual *Dimeromyces*.

***Diandromyces Chilenus* nov. sp.**

Brownish yellow. Basal and subbasal cells of nearly equal length or the latter somewhat longer; the basal cell abruptly narrower, or tapering continuously from base to apex; the subbasal somewhat longer than broad, and slightly narrower above; the third cell shorter, flattened, rounded: the basal cell of the appendage, (fourth cell), larger, separating a subtriangular cell from its distal half on either side which forms the base of a simple branch; the fifth and sometimes the sixth cells producing one, or often two, branches in a similar fashion, or more often without the small basal cell; the rest of the appendage running into an elongate, rather stout, simple, slightly tapering terminal portion. Stalk-cells of the antheridia subtriangular, occupying two thirds or more of the outer margin of the subbasal cell, their outer wall very thick and browner; the antheridium divergent at an angle of about 45° , the four or five antheridial cells subtended by a flattened basal cell: the venter tapering, but rather clearly distinguished from the straight rigid neck; which is slightly longer and nearly uniform. Stalk-cells of the perithecia short, abruptly broader above their narrow origins from cell three, which are slightly anterior; the secondary stalk-cell somewhat rounded, much broader than long, occupying the whole width of the region on the anterior side; the basal cell region broad and not clearly distinguished from the ascigerous region, which it slightly overlaps; the body of the perithecium slightly inflated below, subconical, stout, subsymmetrical; the tip short, distinguished by a slight indentation of the outline; the apex slightly longer, its extremity flat-conical. Spores about $35 \times 3 \mu$. Perithecium above stalk-cell $90-105 \times 30-40 \mu$. Antheridia above stalk-cell 35μ . Receptacle average 70μ . Appendage, longer 225μ . Total length to tips of perithecia $150-190 \mu$.

On the elytra, abdomen, etc. of *Leptoglossa sculpticollis* Fvl., Corral, Chile, No. 1899.

Well developed specimens of this species are almost perfectly bilaterally symmetrical, the divergence of the paired antheridia and perithecia increasing with age. The elongate distal portion of the appendage is soon broken off, and persists in few even of the younger specimens. The host has been kindly determined by Dr. Fenyes.

Dichomyces Chilensis nov. sp.

Pale yellow tinged with brown, more deeply on the right side; asymmetrical through the somewhat greater development of the tiers at the right, and the greater length of the left perithecium; form rather stout, with a slight curvature to the right from base to apex. Basal cell large and broader than long, stained with blackish brown just above the foot. Second tier consisting of four cells, including a small cell separated at the right. Second tier consisting of usually twelve cells, five at the left and six at the right of the median cell, the paired antheridia large, conical, erect, pale brown. Third tier of usually about fourteen cells, one or two more at the right than at the left. Appendages rather short and unequal. Perithecia two, paired, arising on either side of the median cell, tilted slightly to the right, somewhat asymmetrical, uniformly pale brownish yellow, the apex subhyaline, the tip darker brownish; rather long, of nearly uniform diameter, slightly inflated, the tip rather clearly distinguished by its color and decreasing diameter; the apex as long, broad, distally flat conical, not quite symmetrical. Spores about $35 \times 3.4 \mu$. Perithecium $75-100 \times 22-25 \mu$. Total length to tip of perithecia $175-220 \mu$, greatest width $50-80 \mu$.

On *Quedius* sp., more often at the tip of the abdomen, No. 1522, Corral, Chile.

This species is well distinguished by its asymmetry of form and coloration, and the flat conical termination of its perithecia. Like other species of the genus it varies greatly in size and the number of cells in the tiers above the first is somewhat inconstant. As usual individuals with single antheridia and of somewhat stouter habit may occur on the legs.

Cantharomyces Andinus nov. sp.

General color brownish yellow, the basal cell and the stalk-cell nearly hyaline. Receptacle strongly geniculate, the basal cell somewhat longer than broad, of nearly uniform width, the lower half, or

less, of its posterior wall involved in the blackening of the foot; sub-basal cell short, broad, its anterior margin rather strongly convex, especially below; the posterior straight or slightly concave below; its posterior half or more suffused with brownish black, its upper margin horizontal. Appendage erect, or slightly bent outward; its stalk-cell hardly longer than broad, the upper third of the wall involved by a blackish brown shade especially conspicuous on the inner side; the antheridial segment about as large, or somewhat larger, squarish, or slightly broader than long, the antheridial area lateral and external, or somewhat irregular; the appendage above it consisting of from three to five cells, flattened, the two lower more so, their margins strongly convex, separated by constrictions at the thin dark brownish septa; the terminal cell producing distally, and one or two of those below it laterally, stout simple more or less erect branches, of which there may be four or five, usually coherent. Stalk of the perithecium rather short and stout, its base narrow, more than twice as broad distally, a more or less well defined somewhat irregular constriction just below the middle: basal cells clearly defined, subequal, irregularly rounded below, slightly concave above, the region somewhat prominent on either side below the venter; the venter, neck, tip and very short apex regions rather clearly indicated by corresponding depressions of the outline, which is straighter on the inner side, the outer margin usually turning rather abruptly inward at the junction of the neck with the venter; which is somewhat inflated, and includes nearly half the total length of the perithecium, which tapers distally to its broad stout rounded or subtruncate extremity. Perithecium $45-50 \times 20-22 \mu$; the basal and stalk-cell regions about $28 \times 18 \mu$. Axis of the appendage, including stalk-cell, $35-40 \times 15 \mu$; the longer branches $30 \times 6 \mu$. Receptacle, including foot, $30-34 \times 18 \mu$. Total length to tip of perithecium $90-112 \mu$.

On *Trogophloeus* sp., No. 1471, Baños de Apoquindo near Santiago, Chile.

This species is closely allied to *C. Trogophloeae* Speg. and *C. pusillus*, as well as to the two following species, all of which occur on similar hosts, and are characterized by the flattened cells of the axis of the appendage above the antheridial segment, which are separated by indentations and dark septa. It resembles Spegazzini's species in its general form and the suffusion of the subbasal cell; but differs in its smaller size, branched appendage and much less conspicuously tapering perithecium. The hosts were found swarming under stones in a mountain stream, in company with a larger form on which the following species was parasitic.

Cantharomyces Chilensis nov. sp.

Unevenly tinged with dark smoky brown, the basal cell and the stalk of perithecium paler. Receptacle somewhat geniculate, short, the basal cell darker above, its posterior wall somewhat blackened in connection with the foot, broader distally; subbasal cell mostly somewhat shorter, subtriangular, the walls, especially the posterior, very dark blackish brown. Appendage short and very broad, its outer walls very dark blackish brown, the stalk-cell usually broader than long, its inner upper angle rather conspicuously blackened; the antheridial segment usually slightly larger and somewhat convex on either side, somewhat oblique above and below, the outer margin shorter, the antheridial region usually on the right; the rest of the appendage consisting of a very broad flat dark cell, lying almost opposite the base of the ascigerous region, sometimes followed by a second smaller one; the cell above dividing several times vertically or obliquely, its divisions proliferating to form an irregular group of short, simple, stout, hyaline branches of variable length and divergence, sometimes ten or more in number. Perithecium and its stalk similar to that of *C. Andinus*, the basal cells about equal, darker than the pale stalk, but lighter than the dark smoky brown body; which is subtended on either side by more deeply blackened areas of the wall; the apex nearly hyaline. Spores about $28 \times 3.5 \mu$. Perithecium average $70 \times 30 \mu$: the stalk- and basal cell region $35-42 \times 20 \mu$. Appendage, to tips of branchlets, longest, about 65μ , the axis, including stalk-cell, $35-42 \times 18 \mu$. Receptacle, including foot, $32 \times 20 \mu$. Total length to tip of perithecium $110-130 \mu$.

In various positions on *Trogophloeus* sp., No. 1474, Baños de Apoquindo, Chile.

This species, which is distinctly larger than the last, although it is closely allied to it, differs in the absence of any contrasting blackening of the subbasal cell, in its general dark smoky brown color and especially in the characters of its very broad appendage.

Cantharomyces Valdivianus nov. sp.

Basal cell of the receptacle bent, sometimes at right angles to the subbasal, of nearly uniform width, nearly hyaline or faintly brownish, distally involved by the opaque suffusion of the subbasal cell, the upper somewhat oblique margin of which, and a small portion of the anterior

wall near the base, are translucent brown; the cell straight, long-obconical, or cornucopia-shaped. Appendage slightly divergent, the stalk-cell somewhat broader than long, pale brownish, the walls of the upper half deep brown; the antheridial segment squarish, slightly narrower, uniform yellowish brown, externally slightly convex; the antheridial region usually external and lateral (right); the rest of the appendage consisting of from five to eight flattened concolorous cells, separated by constrictions and darker brown septa, one to three of the terminal cells producing short simple stout branches, of which there may be as many as six, two or three of which may arise side by side from the terminal cell. Perithecium and its stalk erect, or somewhat divergent, similar to that of the preceding species, but longer; the basal cells clearly defined, yellowish, narrower than the base of the concolorous perithecium; the venter symmetrically inflated, the junction of its wall-cells with those of the tapering neck portion indicated by a brownish shade; the tip rather well differentiated, relatively long, tapering very slightly; the apex very short, rounded and pale. Spores about $39 \times 3 \mu$. Perithecium $55-70 \times 18-20 \mu$. Stalk and basal cell region about $50 \times 18 \mu$. Main axis of appendage $50-70 \mu$, longer terminal branches $42 \times 7 \mu$; antheridial segment $17 \times 19 \mu$. Total length to tip of perithecium $125-175 \mu$. Receptacle $60 \times 28 \mu$, distally $\times 8 \mu$ at base, the subbasal cell, average 50μ long.

On various parts of *Trogophloeus* sp., No. 1901, Corral, Chile.

This species, which is much larger than the two preceding, is more nearly allied to *C. Trogophloeae* Speg., from which it differs in its elongate opaque subbasal cell, and in the characters of its appendage. The symmetrical form of the perithecium is similar, but the tip is less abruptly distinguished and relatively stouter. The host was found in wet refuse caught against stones in a brook.

***Cantharomyces Magellanicus* nov. sp.**

Basal cell nearly hyaline, about twice as long as broad separated by a slight abrupt constriction from the subbasal; which is short, abruptly three or four times as broad, irregularly cup-shaped, brownish yellow, deeper brown below and externally where it is strongly convex and separated by a constriction from the stalk-cell of the appendage; which is somewhat broader than long, externally strongly convex, concolorous, a deeper brown area let into the distal walls: antheridial segment abruptly somewhat narrower, externally prominent above,

paler, the antheridial area external and on the left; the rest of the appendage short, tapering considerably, consisting of three (? always) cells, the upper prolonged into a short, cylindrical, blunt termination. Stalk of perithecium yellowish, elongate, uniform, the walls thicker than the lumen above; the basal cell region short, rather abruptly spreading; the perithecium somewhat asymmetrical, tinged with brown, somewhat inflated, the apex ending in a short blunt projection directed inward at right angles, and subtended externally by a somewhat shorter, broader blunt projecting cell which lies partly on the right. Perithecium, including basal cells, about $100 \times 40 \mu$, the stalk $120 \times 15 \mu$. Appendage about 70μ , the stalk-cell $28 \times 18 \mu$, the antheridial segment $22 \times 20 \mu$. Basal cell of receptacle $16 \times 8 \mu$, subbasal cell $14 \times 25 \mu$. Total length to tip of perithecium about 225μ .

On a small yellowish aleocharid staphylinid, at the tip of the abdomen. No. 1454, Punta Arenas, Magellanes, Chile.

I have described this form with much reluctance, owing to the fact that the material is limited to two very young and a single mature individual in which one of the two perithecia which were originally present, has been broken off, and the other has ceased to function and become bent upon itself, although its peculiar characters are clearly determinable. As the chances of its rediscovery in this remote region are slight, and in view of its very striking peculiarities, I have felt that it was safe to assume that it can be easily recognized, should it be found again. The form of the receptacle, the very elongate perithecial stalk, and the peculiar projections from the apex of the perithecium, are quite sufficient to separate it.

***Monoicomyces Zealandicus* nov. sp.**

General habit short and compact, usually symmetrical. Basal cell minute, tinged with brown, the subbasal even smaller, hyaline, hardly distinguishable. Basal cell of the primary appendage nearly as large as the basal cell and foot, olivaceous brown, somewhat rounded in outline, bulging on the posterior side and lying below the black insertions of the perithecial stalks; the rest of the appendage bent inward, short, simple, hyaline, slightly tapering; consisting of about three or four cells, slightly longer than broad. Perithecia normally two, seldom three, paired, subtended externally by corresponding antheridia; the stalk-cells hyaline, narrow above their black insertions,

broad distally, about as long as the primary appendage; basal cell region broad, the cells flattened; perithecium subsymmetrical, pale yellowish, the lower half considerably inflated; the distal tapering; the tip distinguished by a slight depression; the apex blunt, with very minute projections on either side. Antheridia brown, dark blackish olivaceous externally, the margins nearly opaque below and almost meeting between the basal and subbasal cells; compact, broad, the margins and termination rather strongly convex; the two terminal appendages shorter than the antheridia, erect, broader above; their close set, narrow insertions, dark blackish olive, the terminations usually hyaline. Perithecium $50-60 \times 20-22 \mu$, the stalk-cell $18-25 \times 10 \mu$, distally. Antheridium $35 \times 16 \mu$, its appendages, longest, $32 \times 5 \mu$. Total length $95-108 \mu$, greatest width $40-50 \mu$.

On the abdomen of *Atheta (Acrotona) Fungi* Graoh. (fide Dr. Fenyès), No. 2196, and on the abdomen and legs of somewhat larger form, No. 2197, Auckland, New Zealand.

This species is very closely allied to *M. nigrescens* which it resembles in general form and coloration. It seems to be clearly distinguished by the form of its antheridia, which lack the peculiar wedge-shaped outline of this species, the termination being convex instead of flat or concave. The perithecia are somewhat shorter and stouter, the antheridial appendages shorter, as is the stalk-cell of the perithecium. The broad brown basal cell of the primary appendage, which replaces the narrow black insertion of the appendage in *M. nigrescens*, is also quite different.

Eudimeromyces nov. gen.

Male individual, consisting of three superposed cells terminated by a single simple antheridium.

Female individual. General structure as in *Dimeromyces*, a basal cell followed by a small number of receptacle-cells, which pass without abrupt differentiation into a filamentous sterile appendage. Perithecium single in the type, arising from one of the lower cells, the walls of its basal and stalk-cells becoming entirely obliterated.

Were the antheridia of this type compound, its reference to *Dimeromyces* would hardly be doubtful, owing to the characters of the female which conform in general to this generic type, although there are no secondary sterile appendages, and the primary appendage is not differentiated from the receptacle, as is usually the case in *Dimeromyces*. In the male, however, the antheridium is terminal, not lateral, and is definitely simple and solitary.

Eudimeromyces Chilotis nov. sp.

Male individual. Hyaline, slender, the three cells nearly uniform in length and width, the antheridium tapering, its neck and venter about equal in length. Total length including foot $25 \times 4 \mu$. Antheridium 12μ .

Female individual. Hyaline. Receptacle consisting of a basal cell and usually four additional cells somewhat transversely disposed. The basal cell slightly tinged with brownish, the subbasal larger than the others and prominent above the insertion of the perithecium, associated with a second cell finally nearly as large, and separated from it by division; the perithecium arising from the next much smaller cell: the fourth cell similar and obliquely separated from it, the basal cell of the appendage not otherwise distinguished, but larger and longer, the axis of the appendage simple, tapering, variably developed. Stalk of perithecium thick-walled, tapering somewhat below, not differentiated from the body of the perithecium; which is broader distally, nearly symmetrical; the tip and apex short and tapering to a broad truncate, or slightly rounded, symmetrical termination. Spores about $20 \times 2.6 \mu$. Perithecium, including stalk, $65-75 \times 14-15 \mu$. Receptacle $14-17 \times 11-13 \mu$. Appendage, longer, $110-120 \times 8 \mu$. Total length to tip of perithecium $80-100 \mu$.

On the elytra of *Chilotis formosus* Reit. No. 1473, Baños de Apoquindo and No. 1898, Corral, Chile.

Sufficient material of this minute form has been examined, which shows but slight variations, principally in size. The perithecium appears to originate either at the right or left, its origin being somewhat misplaced by the growth of the two larger cells of the receptacle which are vertically elongated and lie side by side; the inner or third cell overlapping the fourth, which bears the perithecium. A somewhat similar condition of the receptacle is seen in species of *Dimero-myces* like *D. appressus*.

Herpomyces Chilensis nov. sp.

Male individual: copiously four or five times branched, the branchlets bearing terminally long, usually curved, slender antheridia, about $18 \times 2 \mu$. Total length about 65μ ; width of tuft in large specimens $50-65 \mu$.

Female individual. General characters like those of *N. Nyctoborae*.

Secondary receptacles forming a row on either side of the primary insertion, adventitious receptacles arising behind them so as to form a group of sometimes more than ten; which are clearly distinguished, short and broad, somewhat spreading below, owing to a slight divergence from above downward, of the ten or twelve narrow vertical cells which form them; the basal and stalk-cell region distinguished by a more or less well defined constriction, short, variably prominent especially on the outer side owing to the convex margins of the somewhat bulging outer and inner cells, the region thus usually broader than the base of the venter, the perithecium as a whole very long and slender, its length about six times its greatest width, the ascigerous half tapering distally, the distal half narrow and more or less uniform in width; the two subterminal spines about equal and originating almost side by side. Perithecium above basal cells, to tip of terminal spine, $140-165 \times 18 \mu$ (ascigerous half) $\times 9 \mu$ (distal half); spines, subterminal $30-32 \mu$, terminal 10μ . Basal region $15-17 \times 22-24 \mu$. Secondary receptacles $18-20 \times 28-32 \mu$. Total length $175-220 \mu$.

On the antennae of a wingless roach, No. 1475, occurring under stones about the Baños de Apoquindo, Chile.

This form is very closely related to *H. Nyctoborae* of which it may prove but a variety. Abundant material of both species, however, shows constant differences, especially in the form and structure of the secondary receptacles which are much longer in *Nyctoborae*, the cells more numerous, very narrow and parallel; while in the present form they are short, relatively stouter, diverging slightly below, so that the receptacle has a slight fan shaped habit, and are at most ten or twelve in number. The length of the perithecium is much greater, and the slender terminal portion proportionately longer. The antheria appear to be more slender and slightly curved to form an appressed mass, but it has been impossible to determine the exact nature of the primary receptacle in either of the sexes.

Corethromyces Silphidarum nov. sp.

Uniform dirty yellowish throughout; habit straight, rather stout. Basal cell small, hardly longer than broad; subbasal cell twice as long, more or less, of nearly uniform diameter, somewhat obliquely separated terminally from the basal cell of the appendage: which consists of an axis which is repeatedly branched above the subbasal cell, some of the branchlets antheridial, their lower cells obliquely

separated and becoming antheridia, the tuft of branches variably developed and seldom reaching beyond the tip of the perithecium. Stalk-cell of the perithecium subtriangular, lying beside and parallel to the subbasal cell, often extending slightly lower so that it is in contact with the basal cell; the secondary stalk-cell broad and rather large, obliquely separated from it; the basal cells small and not clearly defined. Perithecium straight, erect and symmetrical, or very slightly bent distally and more convex on the inner side; tapering slightly distally to the unmodified, rather blunt, flattish or rounded termination. Spores approximately $20 \times 2 \mu$. Perithecium $50-65 \times 15 \mu$. Appendage $50-60 \mu$, its basal cell about $10 \times 7 \mu$. Receptacle $18-20 \mu$ by $16-18 \mu$, including the stalk-cell of the perithecium. Total length $85-100 \mu$.

On the elytra of a small species of *Choleva*. Corral, Chile, No. 1495.

The appendages of this mondescript little form are usually so clogged with dirt, owing probably to the unclean habits of its host, that it is often difficult to make out the structure of the axes. In a few specimens many of the branchlets, which are variably developed, though sometimes copious, appear to conform to the normal type of the antheridial branchlets in this genus. It is most nearly allied to *C. bidentatus* and *C. curvatus* which occur on a similar host. Its appendage is very similar to that of the former, but it differs from both in the form of its straight erect perithecium, and the much greater elongation of the subbasal and perithecial stalk-cells.

***Corethromyces curvatus* nov. sp.**

Color uniform pale yellow; rather short and stout, for the most part strongly curved. Basal cell hardly if at all longer than broad; subbasal cell and perithecial stalk-cell lying side by side, subequal. Appendage stout, its axis consisting of four or five cells; those above the basal producing distally on the inner side single, stout, rather short, slightly divergent branches, which may be once or twice branched, their lower cells short and broad, the lower more or less evidently united to the cells of the axis and branch above them, from which they are obliquely separated; the general axis thus appearing to be multicellular and relatively stout; the distal branches somewhat crowded. Perithecia strongly curved outward; the stalk- and basal cells clearly defined; the secondary stalk-cell usually smaller than the inner basal cell; the other basal cells more or less obsolete, or ob-

literated: body of the perithecium stout, the distal half tapering slightly, the outer margin nearly straight, the inner strongly convex; the short broad asymmetrical subtruncate apex broadly protruding externally, less broadly on the inner side, the smaller inner protrusion subtending an abruptly defined terminal papilla, which is thus not median. Spores about $24 \times 2.5 \mu$. Perithecium $55-60 \times 20-22 \mu$. Appendages, to tips of branches, $75-100 \mu$; longest branches $50-60 \mu$. Stalk and basal cell region $35 \times 38 \mu$. Total length to tip of perithecium $75-95 \mu$.

At the base of the posterior legs of a species of *Choleva*. No. 2143b, Auckland, New Zealand. Messrs. Eames and Sinnott.

This species is most nearly related to *C. Silphidarum*, which occurs on a similar host, and to *C. bidentatus* with which it is associated. It differs from both of these species in the conformation of its perithecium and appendage, the somewhat massive character of the latter, which results from the union of the lower cells of the main branches to one another and to the cells of the axis, being quite different.

***Corethromyces bidentatus* nov. sp.**

Uniform pale yellow, variably bent and curved. Basal and sub-basal cells subequal, short. Axis of the appendage usually straight and suberect, consisting of usually three to five cells; the basal and subbasal large and appearing to bear terminally a tuft of branches, some of the branchlets of which consist of seriate antheridial cells. Perithecium divergent, curved outward and bent sidewise, as a rule; broader below, and tapering to the apex, which is more or less distinctly prominent on the inner side; thence tapering somewhat to a blunt pointed termination, which is subtended on the outer side by two short tooth-like projections, which diverge from the same point. Spores about $20 \times 2.5 \mu$. Perithecium $52 \times 15 \mu$. Appendage to tips of branches $55-65 \mu$. Total length $60-70 \mu$.

On the elytra of a species of *Choleva*. No. 2143, Auckland, New Zealand. (Messrs. Eames and Sinnott).

Although a considerable number of specimens of this form have been examined, a majority of them are injured or abnormal. The species is most nearly related to *C. Silphidarum*, from which it is at once distinguished by the two short divergent tooth-like projections which arise laterally from the apex.

Corethromyces bicolor nov. sp.

Foot broader than the base of the long slender obconical receptacle; which is opaque, the cell boundaries indistinguishable, except a small translucent portion just above the foot, its distal end asymmetrically furcate, owing to the presence of two blunt, hardly divergent lobes; one larger and longer, lying at the left and overlapping a portion of the venter; the other anterior, smaller and shorter, but otherwise similar. The perithecium usually bent at a slight angle to the axis, slightly inflated below, the region of the venter blackish olive, contrasting rather abruptly with the perfectly hyaline distal half or more; which tapers to the rather broad, slightly enlarged, somewhat rounded apex, from the middle of which a short blunt projection extends upward; the stalk-cell when partly visible, short, and hyaline. Appendage more or less concealed by the longer lobe, hyaline; consisting of a short axis with a few short hyaline branches on the inner side. Perithecium $50 \times 16 \mu$. Receptacle to tip of longer lobe, including foot, $70-85 \mu$. Total length $110-124 \mu$, greatest width $20-24 \mu$.

On legs and inferior abdomen of a species of *Choleva*. Aukland, N. Z. No. 2143 (Messrs. Eames and Sinnott).

This very striking species, which belongs to the group that includes *C. Quedionuchi*, is at once distinguished by the coloration of its perithecium, and by its elongate, opaque, bilobed receptacle.

Corethromyces Valdivianus nov. sp.

Basal cell of the receptacle much elongated, funnel shaped, opaque, with a small translucent area above the foot; the blackening involving the inner portion, or sometimes almost the whole, of the subbasal cell as well as the outer half or more of the axis of the appendage; the inner walls remaining hyaline, one or two of the terminal cells usually not involved: subbasal cell of the receptacle obliquely placed, much flattened, its outer and sometimes its upper edge hyaline. Axis of the appendage consisting of five or six cells, tapering somewhat distally, and more or less distinctly curved toward the perithecium; the branches short and scanty, pressed against the venter. Stalk-cell of the perithecium hyaline or pale yellowish, oblique, somewhat rounded, much broader than long, forming, with the subbasal cell and the secondary stalk-cell, a paunch-like protrusion of this region, which

is usually well marked; basal cells small, the region distinguished above the secondary stalk-cell by a rather abrupt depression. Perithecium straight, erect, or rarely very slightly divergent outward, the outer margin straighter: the venter-region more than twice as long as the rest of the perithecium in well developed individuals, hardly inflated, pale brownish yellow and uniform in width with the basal cell region: the neck-, tip- and apex-region concolorous, tapering; the apex very short, its small blunt extremity slightly roughened. Spores $45 \times 3.5 \mu$. Perithecium $120-140 \times 20-22 \mu$, including basal cells. Receptacle, to tip of axis of appendage, $100-120 \mu$; greatest width in region of paunch-like protrusion, $28-32 \mu$. Total length to tip of perithecium $190-225 \mu$.

At the tip of the abdomen of a species of *Quedius*. Corral, Chile. No. 1522.

This species is most nearly related to *C. atropurpureus*, the general form of the perithecium, which lacks any terminal modification, being similar. It is most readily distinguished by the paunch-like protrusion in the region of the perithecial stalk-cell, and the opaque suffusion which extends nearly to the tip of the axis of the appendage.

Corethromyces Andinus nov. comb.

Sphaleromyces Andinus Spegazzini. Revis. d. l. Laboul. Arg. p. 670. Ann. d. Mus. Nat. d. B. A. XXIX, 1917.

Abundant material of this species was obtained at Corral and Concepcion on *Quedius* sp., No. 1522. It appears to differ constantly from *C. Quedionuchi*, to which it is very closely related, in several characters. The opaque suffusion which, in the latter, does not quite extend to the upper edge of the basal cell, the upper limit of the suffusion being horizontal, or but slightly oblique, extends upward in the present species so that it involves not only almost the whole of the subbasal cell, but also the axis of the appendage nearly to its tip, its inner margin only, being hyaline or translucent. The axis of the appendage also diverges distinctly, and then curves toward the perithecium, the short hyaline branches being crowded against it. The conformation of the apex is also somewhat different, the outer lobe being more clearly distinguished, and not characterized by the even oblique curvature seen in that of *C. Quedionuchi*. In well developed specimens of *C. Andinus*, which may have a total length of 265μ , the perithecium, above the basal cells measuring $150 \times 22 \mu$,

there is also a characteristic and deep external constriction just above the prominent and rounded secondary stalk-cell, not indicated in Spegazzini's figure, which appears to represent a rather small and not fully developed individual.

In addition to the species of *Corethromyces* above enumerated the typical form of *C. Stilici* was found at Corral, as well as two other species of which the material is not sufficiently good for purposes of description.

CUCUJOMYCES Spegazzini.

Abundant material of the three species of this genus described by Spegazzini (Revis. d. l. Lab. Argentin. p. 506) were obtained at Corral on *Hyliota Chilensis*, together with several other forms or varieties on this and other hosts. A single species has also been received from New Zealand which is herewith included, and still another from Kamerun which is not sufficiently mature for description. There are thus about ten species known, including *Cucujomyces elegantissimus* (Spegazzini sub *Stephanomyces*). The description of *Cucujomyces* which is given by Spegazzini appears to have been based on a misapprehension of the antheridial characters, since it is included by him in the Peyritschelleae, with which it does not appear to be even remotely connected. The compound antheridia, of a type approaching that of *Monoicomyces*, which he describes, are not present in any of the very numerous specimens of all ages that I have examined. Simple flask shaped antheridia of the normal type are, however, easily recognized in a majority of individuals, either borne terminally, sometimes on shorter, slightly specialized branches, as in *C. melanopus*, or more often variously disposed on secondary branchlets as in *C. elegans*. The affinities of the type seem to be rather with *Teratomyces* and *Symplectromyces*, and I was at first uncertain whether it might not better be referred to the latter genus. The primary receptacle in both these genera is, however, three celled, while in all the species of *Cucujomyces* it is two-celled; and for this reason, chiefly, it seems better that it should be separated.

The general structure which characterizes the species of the genus is as follows. The primary receptacle, consisting of a basal and a subbasal cell, is terminated by a primary appendage arising from the latter, which, in certain species or individuals, may give rise also to a subtending primary perithecium. In all species the subbasal cell further proliferates on either side to form corresponding secondary

receptacles which grow acropetally in opposite directions, each consisting of a single series of cells which usually passes distally into an appendage-like termination. The cells of these receptacles may be so crowded that they appear to form a compact multicellular body, like that of *Teratomyces*; or they may grow out quite free on either side of the primary axis, sometimes curving backwards and meeting so as to form a more or less complete ring around the foot. Such strongly curved axes usually lie flat on the surface of the host the perithecia projecting upward from them. A variable number of the basal cells of these receptacles give rise to branches, and in a majority of cases, where their origin can be clearly seen, this branch seems to be single, its basal cell giving rise, however, either to secondary branches, which are usually those on which the antheridia are borne, or to perithecia, or to both. When the perithecium is mature, it thus usually appears to be subtended by the primary branch which it in reality subtends.

CUCUJOMYCES ELEGANS Speg.

What appears to be this species was found on the elytra of *Hyliota Chilensis* at Corral associated with all the other forms that occur on this host. The basal cell is more or less deeply tinged with brown; the insertion of the stalk-cell is black, the stalk itself is hyaline, or very faintly purplish, the perithecium pale purplish, but it is otherwise absolutely hyaline. I have separated the following form from it on account of its invariably blackened septa, purple or partly blackened perithecial stalk and somewhat different appendages, the cells of which are smaller, shorter and more numerous; usually separated by slight constrictions, the thin black septa edged below with faint purplish brown, suffusions. The appendages and their branches, which are more divergent and give the effect of dichotomy, are usually more numerous and rigid, but the form may be merely a variety or possibly a hybrid.

Cucujomyces intermedius nov. sp.

Similar to *C. elegans*. The basal cell slightly suffused; the perithecia similarly modified, the stalk purple, often dark, or the upper portion quite opaque; the primary and secondary branches and branchlets numerous, divergent, mostly rigid and but slightly if at all curved; the larger axes of both branches and branchlets composed

of short, often bucket-shaped, cells, separated by more or less distinct constrictions and black thin septa, edged below with variably distinct purplish brown. Perithecia often subtended by a slight enlargement of the stalk, marked by transversed or slightly oblique purplish lines, the base often involved in the purple suffusion of the basal cell region; including the latter $38-45 \times 16-18 \mu$; the stalk $175-300 \times 12 \mu$. Longest branches $100-125 \mu$. Largest cells of the branches $8.5 \times 7 \mu$ or less.

On *Hyliota Chilensis*, Corral, Chile.

***Cucujomyces stipatus* nov. sp.**

Basal cell relatively large, somewhat longer than broad, deeply suffused with brown; the subbasal cell smaller and obliquely divided into two cells, the upper of which forms the basal cell of the primary appendage and is distally prominent externally, its margin bending abruptly inward to the insertion of the free appendage, which is composed of eight or more flattened cells, separated by constrictions and blackish septa, two to four of the distal ones bearing short up-curved or rigid slightly divergent branchlets. Secondary receptacles more or less involved in the brown suffusion of the receptacle, their closely crowded cells forming with it a compact body, somewhat triangular in outline, which may be as a whole nearly opaque, the exact origins of the numerous branches and of the perithecia, several of which may mature, is hardly determinable; the bases of the secondary receptacles overlapping the basal cell somewhat and deeply blackened; the branches similar to the primary appendage above its basal cell, some terminating in an antheridium or bearing one or more short antheridial branches in addition to sterile ones. Perithecia bent more or less abruptly backward above the short hyaline portion of the stalk, the insertion of which is black, and which is succeeded by an opaque area that broadens distally and involves the secondary stalk-cell and the basal cell region, except its upper inner angle, and extends obliquely beyond the base of the perithecium. The latter slender, subcylindrical, or slightly inflated below, and tapering slightly to the extremity; the venter and neck regions not distinguished, and marked by more or less regular transverse purplish bands, which separate corresponding hyaline ridges that are variably evident; the tip long, clearly differentiated, often slightly inflated, purplish, tapering slightly to the very short apex which is bluntly rounded or

subtruncate and distinguished only by its paler color. Spores about $35 \times 3 \mu$. Perithecium, including opaque area, $100-130 \times 18 \mu$. Longer appendages to tips of branchlets $50-70 \times 5 \mu$. Total length $140-175 \mu$. Main body of receptacles about $50 \times 28 \mu$, including foot.

On the elytra of *Hyliota Chilensis*. No. 1490, Corral, Chile.

This species is closely related to *C. cylindrocarpus*, and may prove only a compacted variety of this species, although its appearance is very different. The general form of its receptacles is very similar to that of species of *Teratomyces*, and the cells are so closely associated that the details of their arrangement are very difficult to determine. Its fundamental structure, however, is entirely similar to that of other species of the genus. The basal cells of the primary branches appear to produce secondary branches, or perithecia, on both sides. The antheridia are of the usual type and commonly terminal.

CUCUJOMYCES CYLINDROCARPUS Spegazzini.

This species was found in abundance at Corral on *Hyliota Chilensis*, and differs from the preceding form in its free normal secondary receptacles, which develop right and left in the usual fashion. The branches are entirely similar in general character, and the basal cell ordinarily produces a branch or rudimentary perithecium which may eventually develop, on both sides. The perithecium is similar, but more slender and cylindrical, its stalk hyaline, well developed and distally rather abruptly constricted below the small opaque area which subtends the perithecium and involves the small secondary stalk- and basal cells. The antheridia are similar in both cases.

CUCUJOMYCES MELANOPUS Spegazzini.

Numerous specimens of a form which appears undoubtedly to belong to this species were found for the most part on the antennae of *Hyliota Chilensis* at Corral, No. 1452 d, and although it does not correspond in all respects to Spegazzini's figure and description, its resemblances are too striking to be accidental. The banded perithecium with its opaque base and stalk-cell, as well as the hyaline bulbous base of the latter are entirely similar. The basal cell is colored, and forms a broad, free, rounded, tongue-like projection lying posterior to the subbasal cell; which bears not only the primary appendage and

perithecium, as well as the usual secondary receptacles, but also certain accessory cells which give rise to branches or perithecia which are thus clustered in the mid-region so closely, that their origin is not easily determined. The primary branches are less distinctly fusiform than is represented in the figure just mentioned, and bear distally a smaller number of branchlets, seldom more than two or three, while there is not the slightest indication of a terminal compound antheridium such as Spegazzini describes. On the other hand there are present from two to six or seven specialized antheridial branches, which arise in the mid-region, shorter than the primary ones, typically simple, and bearing a single well marked terminal simple antheridium of the usual type.

Cucujomyces Diplocoeli nov. sp.

Basal cell of the receptacle dark translucent brown, distally spreading, but slightly overlapping the subbasal cell, which is rather small and normally gives rise to a primary perithecium and appendage; the latter rather stout, the basal and sometimes the subbasal cell often more or less swollen; consisting of usually six or seven cells, tapering somewhat distally. Secondary receptacles hyaline, usually four or five celled, with a tapering three- to four-celled termination, recurved and sometimes meeting to form a complete circle of cells around the foot: the branches hyaline, simple, relatively short, tapering and stout, one or more of the inner usually terminated by an antheridium, or bearing an antheridial branchlet subterminally; the basal cell giving rise to a secondary branch similar to the primary, or to a perithecium, several of which may develop, especially if the primary one is injured or aborted. Perithecium relatively large, the stalk-cell long, stout, rigid, straight or slightly curved, hyaline and often bulbous just above its hyaline insertion; otherwise opaque throughout, the opacity involving the inner basal cell; the broad, horizontal, somewhat irregular upper margin of which contrasts with the paler venter: the large secondary stalk-cell and the two small basal cells hyaline or paler; the region broader than the stalk-cell, and narrower than the venter, which is abruptly broader above it. Perithecium nearly symmetrical, broadest just below the mid-region, dark, rich yellow-brown, punctate-mottled, with a distinct tendency to a transverse arrangement; the distal half darker, almost truncate-conical; the flattish extremity hyaline-edged, with minute papillae on either side. Spores about $30 \times 3 \mu$. Perithecium: stalk $100-220 \times 7 \mu$, the bulbous base

sometimes $\times 18 \mu$; basal cell region $14 \times 18 \mu$; perithecium proper $50-56 \times 20-28 \mu$. Appendages $35-70 \times 5 \mu$.

On the elytra of *Diplocoelus* sp. No. 1897, Corral, Chile.

This species is most nearly related to *C. elegantissimus* and *C. melanopus*, both of which it resembles in its well developed opaque perithecial stalk. The simple antheridia are borne terminally, as a rule, as in *C. melanopus*, and the appendages are not unlike those of the last mentioned species, although they are simpler. It is probable that the appendages of *C. elegantissimus* are also similar, and bear terminal antheridia, but the detail of structure is not clearly shown in Spegazzini's figures. The perithecium, with its transverse mottling, is quite unlike that of either of these species. As a rule but one perithecium matures, but when the primary one is injured, or does not develop, the basal cell of the first appendage of both of the secondary receptacles develops one; and if these are injured, the appendages next in order develop one on either side, so that there may be as many as five present, perfect and imperfect. The development of the secondary receptacles varies considerably, since they sometimes form a disc-like mass in contact with the host, and surrounding the foot more or less completely, so that their true character may be almost or quite obscured.

***Cucujomyces bilobatus* nov. sp.**

Basal cell uniform dark brown, distally somewhat concave and spreading to form two well defined lobes; subbasal cell overlapped by the basal, giving rise to a primary perithecium and appendage, the latter simple, tapering. Secondary receptacles forming a tapering axis, usually simple, turned backward and upward; two, or perhaps more, of the basal cells giving rise to primary branches, mostly simple with short antheridial branchlets, their basal cells proliferous on both sides to form secondary branches and perithecia. Stalk-cell of perithecium hyaline throughout, slightly broader toward the middle, the walls very thick, the lumen almost obliterated distally; secondary stalk-cell and inner basal cell small, about equal, lying side by side, separated from the end of the stalk-cell by a slight indentation and externally slightly convex; the region short, pale: the perithecium stout, slightly asymmetrical; the 'neck' region much darker than the venter, from which it is otherwise in no way distinguished; the tip and apex short, pale, tapering to a broad blunt extremity of evenly rounded outline. Spores about $25 \times 2.8 \mu$. Perithecium; stalk $50 \times 15 \mu$;

main body, including basal cell region, $54 \times 22 \mu$. Appendages longest seen 50μ . Axis of secondary receptacle to tip, longest, 60μ . Spread of bilobed basal cell $18-22 \mu$.

On the elytra of a pale minute cryptophagid closely allied to *Cryptophagus*. No. 2198, Auckland, N. Z.

The material of this species is unfortunately very scanty, only one individual showing a fully developed perithecium. It is easily distinguished, however, from other known forms, by the character of its perithecium and stalk, and especially by the almost furcate basal cell. The basal cells of the primary branches appear to produce secondary appendages, or perithecial rudiments, on both sides, and this seems also to be true of the subbasal cell of the receptacle.

***Cucujomyces curtipes* nov. sp.**

Basal cell tinged with brown, slightly broader than long, lying wholly below the subbasal, which gives rise to a primary perithecium and appendage: the latter tapering, shorter than the perithecium, the basal cell slightly larger: stalk-cell of the perithecium tapering somewhat from extremity to base, less than twice as long as broad, hyaline, its upper third or less opaque, distinguished below by a slight constriction, the region above the opacity, including the secondary stalk-cell, tinged with brown, abruptly somewhat broader, with symmetrically convex margins; the two smaller basal cells slightly prominent, surrounding the base of the ascigerous cavity: perithecium relatively large, uniformly tinged with dark brown, with a very faint indication of mottling, almost symmetrically broadly fusiform above the stalk-cell; distally truncate, or slightly pointed, somewhat darker; except the narrow hyaline distal margin, which is distinguished on either side by a minute papilla. Secondary receptacles straight, or but slightly recurved, diverging slightly downward, three of the basal cells usually producing the normal primary branches, which are closely grouped against the perithecium; the rest of the receptacle, the axis of which consists of four or five cells, producing two to four straight diverging branchlets, from one or both of the two terminal cells: the primary branches hyaline, rather stout, tapering distally, often ending in an antheridium, or with a subterminal short antheridial branchlet; the basal cells of the inner, at least, producing rudimentary perithecia which may develop. Spores $35 \times 3.5 \mu$. Perithecium, stalk $18 \times 10 \mu$; body, including basal cell region, $60-66 \times 22-28 \mu$. Total

length to tip of perithecium 95–105 μ . Primary branches, longest, 50 μ . Total length of secondary receptacles to tips of terminal branchlets, longest, 90 μ .

On the elytra of a minute dark species of *Liodes*, No. 1896, Corral, Chile.

This small species is well distinguished by its large short-stalked perithecium, the long black stalk of *C. Diplocoeli* to which it is most nearly related, being replaced by a small opaque area which subtends the perithecium. The close grouping of the primary branches about the perithecium, and the absence of branches from all but the last one or two cells of the rest of the secondary receptacles, gives it a characteristic habit.

***Laboulbenia antarctica* nov. sp.**

Nearly uniform dull olive brown, becoming darker with age, the basal cell paler, the rest of the receptacle becoming obscurely punctate or mottled. Basal cell usually curved below, somewhat longer than the subbasal cell which is four-sided, often hardly longer than broad, separated by a slightly oblique septum from cell III; which is somewhat broader than long, its distal margin concave; cells IV and V of about equal length, the latter somewhat narrower; the stalk-cell (VI) very obliquely separated from cell II, somewhat smaller than cell III; the secondary stalk cell well defined, smaller, externally prominent. Perithecium rather stout, subsymmetrical, the wall-cells usually describing one quarter of a turn, so that a lateral view of the apex is presented; the main body somewhat broader distally, the black tip rather abruptly distinguished; the apex quite hyaline, contrasting, symmetrical when twisted, the distal margin broad and flat, the lateral lip-cells, which are anterior and posterior in position, ending in conspicuous, broad "valves" which occupy their whole distal margins. Insertion-cell rather thick, lying usually just above the lower fourth of the perithecium, which is free above it. Basal cell of the outer appendage hyaline, four or more times proliferous inward to form a corresponding crest-like series of branches radially placed; the short basal cell of each branch subtended by a thick blackened septum, usually proliferous and producing two or three branchlets radially arranged, more often simple, distinguished by thick black septa, rather long and slender, slightly tapering, hyaline, the lower septum usually black. Basal cell of the inner appendage much smaller, producing a branch on either side, the basal cell of which

repeats the development of the outer appendage in general; being two to four times proliferous, the branches once or twice branched in a similar fashion, and bearing rather slender branches like those of the outer appendage or groups of rather densely crowded appressed curved brownish antheridia; these, or the sterile branchlets, variously predominating in different individuals. Spores about $35 \times 3.5 \mu$. Perithecium $75-85 \times 25-32 \mu$. Receptacle to insertion-cell $90-105 \mu$. Longest appendage $130 \times 3.5-5 \mu$. Total length to tip of perithecium $150-175 \mu$; greatest width $40-45 \mu$.

Near the bases of the mid legs of ?*Antarctia* sp., No. 1452, Punta Arenas, Magellanes, Chile.

Several specimens of the host bearing this species were collected near the entrance to the ravine on the left bank of the Rio de las Minas above Punta Arenas. The species is very well characterized by the structure of its appendages, which recalls that of *L. orientalis*, except that they are less highly developed, and that a branch arises from both sides of the basal cell of the inner appendage. The appearance of the tip of the perithecium, which is usually, but not always, twisted one quarter, so that the anterior and posterior lip cells appear lateral, is quite peculiar, owing to the unusual development of the valves, which occupy the whole broad flat surface of these lips. A somewhat similar condition is present in *L. bidentata*, in which the valves, though narrower are even more prominent, and in several of the species which occur on Chrysomelidae.

Laboulbenia Andina nov. sp.

Olivaceous brown, darker below the perithecium; short and rather stout, the perithecium considerably longer and broader than the receptacle and basal cell region. Basal cell triangular, somewhat longer than broad, paler or hyaline, distally somewhat broader than the base of the somewhat smaller subbasal cell; which is distally pointed and obliquely separated from cells III and VI: Cell III broader than long, cells IV and V of nearly equal length, the latter separated by a vertical, or but slightly oblique, septum; the stalk- and secondary stalk-cells (cells VI and VII) nearly equal, obliquely separated, their combined outer margins rather prominently convex. Perithecium evenly inflated, or slightly asymmetrical, broader at the middle, or slightly above it, the very broad apex bluntly rounded without special modification, usually bent slightly outward. Insertion-cell dark olivaceous, the walls blackish; outer appendage simple,

erect, tapering, short, its basal cell slightly longer than broad; the subbasal abruptly narrower, distinguished above and below by blackened septa, the lower oblique; the distal part consisting of one or two cells, hardly exceeding the middle of the perithecium: basal cell of the inner appendage but slightly smaller, bearing a short simple hyaline branch on either side, erect and appressed, without dark septa. Spores about $25 \times 3 \mu$. Perithecium $65-70 \times 24-28 \mu$. Appendages $28-35 \mu$. Total length $108-112 \mu$, to insertion cell 42μ .

On the posterior legs of *Bembidium* sp. Baños de Apoquindo, Chile.

A minute and simple species distinguished by its olivaceous color, stout form, large pale basal and smaller narrower subbasal cell, and the black septa of its short simple outer appendage. The rather clearly defined walls have a more or less distinct reddish tint.

***Coreomyces subdivisus* nov. sp.**

Uniformly pale brownish yellow throughout; straight, or but slightly bent; the perithecium almost exactly half the total length. Of the three basal cells, the subbasal, only, is usually slightly longer than broad; the third surmounted by from two to four flattened cladophorous cells, more often two, which are in turn followed by a large somewhat flattened cell, surmounted by two more cladophorous cells which subtend the perithecium; which is rather stout, erect, hardly inflated, the distal third or fourth curved outwards and side-wise, the stout bluntly and irregularly rounded apex being rather abruptly bent. Appendages copious, or usually broken off, rather stout, rigid, somewhat divergent, once or twice branched, the tips slightly tapering. Perithecium $80-88 \times 28-30 \mu$. Total length $150-175 \mu$. Appendages, longest 125μ .

On the mid inferior abdomen of *Corisa* sp. No. 1449, Concepcion, Chile.

This species appears to grow only on the middle of the inferior surface of the abdomen. It resembles *C. Corisae* in general appearance, but appears to be constantly distinguished by its smaller size, paler color, and the presence of cladophorous cells immediately below the perithecium as well as in the normal position.

***Coreomyces acuminatus* nov. sp.**

Habit rather slender, subsigmoid, the axis consisting of three cells above which three to seven flattened cladophorous cells are dis-

tinguished. The stalk-cell above them but slightly longer than broad, wider distally; the perithecium pale brownish, the basal third slightly inflated, the rest slightly curved and tapering continuously to a pointed apex. Appendages scanty, rather short. Total length $210\ \mu$, the lower axis $\times 16\ \mu$. Perithecium $80 \times 28\ \mu$, its stalk-cell $20 \times 22\ \mu$, distally.

On the left margin of the upper surface of the abdomen of *Corisa* sp. Concepcion, Chile.

Unfortunately only one of several specimens of this species is fully matured, but all show the rather abruptly acuminate termination which appears to distinguish this species from others of the genus. It is more slender than *C. Corisae*, which was found abundantly in the same locality, and differs in its more or less sigmoid habit. The branches are mostly broken in the type.

